

Module Title Programming In C#	Reference CM3036 SCQF Level SCQF 9 SCQF Points 15 ECTS Points 7.5
Keywords Object Oriented Design, Object Oriented Programming Inheritance, Graphical User Interfaces, Algorithm Design, Lists, Trees, Hashed Tables	Created February 2012 Approved September 2012 Amended Version No. 1

This Version is No Longer Current

The latest version of this module is available [here](#)

Prerequisites for Module

The student will be expected to be familiar with core object oriented concepts gained through attendance at module CM2015 or equivalent.

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To extend the student's knowledge and proficiency in object oriented program design, implementation and testing within the .NET programming environment.

Indicative Student Workload

<i>Contact Hours</i>	Full Time
Assessment	20
Laboratories	40
Lectures	20

Directed Study

Directed Study	20
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Private Study

Private Study	50
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Mode of Delivery

Key concepts and ideas are introduced in lectures. In the lab sessions the students will learn practical aspects of object oriented programming using a modern integrated development environment.

Assessment Plan

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

1. Demonstrate an extended knowledge and understanding of object oriented design concepts.
2. Apply the principles of object oriented association, composition and inheritance to construct class hierarchies which can be implemented in a .NET framework.
3. Understand how to develop event driven applications using delegates and events.
4. Demonstrate competence in the use of a presentation framework that separates graphical layout from business logic.
5. Design applications which handle data via appropriate collections classes or database interface.

Indicative Module Content

The module will focus on developing competence in the C# programming language. Key topics will include: core language fundamentals i.e objects, classes, class relationships; inheritance and polymorphism; delegates and

	Learning Outcomes Assessed
Component 1	1,2,3,4,5

Component 1 - Coursework

Indicative Bibliography

1. ALBAHARI J, and ALBAHARI B. 2015. C# 6.0 in a Nutshell. O'Reilly.
2. SOLIS D. 2012. Illustrated C# 2012 Apress.
3. MACDONALD M. 2012. Pro Wpf in C#. Apress
4. SOLIS D. 2010. Illustrated WPF. Apress

events; using a presentation framework to develop graphical user interfaces; data handling using collection classes or database interface.